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THE DESIGN FOR UTILIZING PROGRAMED INSTRUCTION FOR PRE-SCHOOL CHILDREN.

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IN THIS LIMITED STUDY, THE AUTHOR, ASSUMING THAT LOW ABILITY PRESCHOOL CHILDREN FROM POOR FAMILIES HAVE THE MOST DIFFICULTY WITH PROGRAMED INSTRUCTION, USED CARTOONS TO TEST THREE LARGE PROJECT HEADSTART CLASSES (N-280) ON THREE FACTS AND ON EIGHT MORAL ATTITUDE ITEMS. TWICE THE PREFERRED ANSWERS WERE TAUGHT, AND THE CHILDREN RE-TESTED, BUT PERCENT CORRECT ANSWERS DIMINISHED ON THE SECOND POST-TEST. MERELY BECAUSE MANY RESPONSES WERE CONTRARY TO ACCEPTED MORAL STANDARDS, THE AUTHOR CONCLUDED THAT PROGRAMED INSTRUCTION CAN HELP CHILDREN LIKE THESE LEARN PROPER COMMUNITY MORES. (LH)

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THE DESIGN FOR UTILIZING PROGRAMED INSTRUCTION FOR PRE-SCHOOL CHILDREN

Biloxi Municipal Separate School District
R. D. Brown, Superintendent

TITLE: The Design for Utilizing Programed Instruction for Pre-school Children

PROBLEM: It is becoming increasingly difficult for teachers to individualize instruction, especially for young children. It was the decision of the writer to test pre-school children with poverty backgrounds rationalizing that if these students could learn to use programed materials then all students could learn.

OBJECTIVES:

1. To teach children by use of tape recorders as a tool of learning
2. To design programed instruction utilizing cartoon characters
3. To use the teach-reteach method to determine the amenability of pre-school students to the retention of programed data
4. To measure, to some degree, the moral attitudes of poverty-stricken students

AUTHOR: Billy Eugene Lee, EdD

RESEARCH ASSISTANT: Mrs. Frances Sanchez

SCOPE: This study is limited to three classes of students who were enrolled in the Biloxi Municipal Separate School District Head Start Project during the summer of 1966.

ABSTRACT

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SUMMARY: This study even though limited in scope provides adequate proof as to the amenability of pre-school children to be tested by programed material.

A. The children tested, in the opinion of Head Start officials, were the lowest in ability and achievement; however, the second time tested indicated clearly that children of all ages and abilities are able to learn to use programed data.

B. The utilization of cartoon characters provided an easy identification for all children tested.

C. The teach and reteach method clearly indicates that students may learn even over a short period of time. Table VIII indicates that there are diminishing returns after the first session. The number of correct responses revealed 49.3 per cent prior to instruction and 67.3 per cent after being taught on one occasion. After the second test an increase of only 2.3 per cent gain was made indicating that diminishing returns would be received following the first session.

D. The questions asked concerning morality provided rather startling responses. An overwhelming number of children said that they would keep money found on the playground even if they knew the person who lost it. Most children said that they preferred to watch television on Sunday instead of going to church. They also indicated doubts about obeying parents.

It is obvious that pre-school children from poverty homes need to learn proper mores of the community. This can be done, to some degree, by programed materials.

THE DESIGN FOR UTILIZING PROGRAMED INSTRUCTION FOR PRE-SCHOOL CHILDREN

I. Introduction

The purpose of this study is to determine whether or not pre-school children can be taught the use of programed instruction.

A. The Problem

It is becoming increasingly difficult for teachers to individualize instruction, especially for young students. It was the decision of the writer to test pre-school children with poverty backgrounds rationalizing that if these students could learn to use programed materials then all students could learn.

B. Objectives

1. To teach children by use of tape recorders as a tool of learning
2. To design programed instruction utilizing cartoon characters
3. To use the teach-reteach method to determine the amenability of pre-school students to the retention of programed data
4. To measure, to some degree, the moral attitudes of poverty stricken students

C. Scope

This study is limited to three classes of students who were enrolled in the Biloxi Municipal Separate School District Head Start Project during the summer of 1966.

II. Background Material

The Biloxi Municipal Separate School District is engaged in a comprehensive inservice training program. One of the objectives is to develop curriculum materials for all students in the school district.

A. Example

In order to point out the simplicity of design the writer asked the Director of Project Head Start to select three classes that he considered to be the lowest in ability. Two classes were selected from Perkins, one with a white teacher the other a Negro. All students at Perkins are Negro. The other class selected was all white, including teacher, in Howard II school. Howard II is located in an all white school in a neighborhood of low income families.

Two elementary children, a boy and a girl, were asked to list their favorite cartoons. Each child listed ten comic characters and from this list Mrs. Betty McClanahan drew three pictures of each. The first character was placed on the left side of the page and a circle was drawn around it. In the middle of the page a large sketch was made of the same character and on the extreme right a small sketch was made. See Appendix A.

The purpose of the sketches was to enable children to distinguish between the answers to each question. Each child was asked to place his finger on the character with a circle around it, and when the answer was called for each child would place a mark on the proper sketch.

The test contained ten questions with two answers being given to each question. In order to make the situation as normal as possible, three children, two Negro and one white, were asked to participate in the making of the tape. The three children, their teachers, the director and assistant director of Head Start were present when the author read the script for taping. A minimum amount of supervision was necessary. The script may be found in Appendix B.

III. Presentation of Data

The assistant director of Head Start administered the tests at all locations. After the test each teacher taught the children the preferred responses. In a few days the assistant director administered the test again. The teachers, in turn, again taught the correct responses. The project was completed at the end of the third test.

A. Data obtained as a result of the three tests.

IV. Analysis of Data

For purposes of explanation teacher A is a Negro teacher teaching all Negro children; teacher B is a white teacher teaching all Negro children; and teacher C is a white teacher teaching all white students. No effort is made measuring the quality of instruction.

The three classes selected were based on the opinion of the Head Start Director, in concert with teachers, selecting classes from the most poverished area and those with the least ability. No attempt has been made to measure the ability of the students as to establishing I. Q.'s.

A. Table I, page 3

The data shown in Table I indicates that one class, teacher A, contained a higher number of wrong responses (50) than those who answered correctly (49). The students in teacher B's class showed a higher number of non-answers. (16) than the other two groups. Children under teacher C scored higher than groups A and B and answered each question.

B. Table II, page 4

The data gathered in Table I indicates results from the first test. No instructions were given concerning the desired answers. In Table II, teacher

TABLE I

PROGRAMED TEST DATA OBTAINED
FROM THREE HEAD START CLASSES IN
THE BILOXI MUNICIPAL SCHOOL DISTRICTS
DURING AUGUST, 1966
(First Test)

	Teacher A	Teacher B	Teacher C
Number Right	49	39	60
Number Wrong	50	35	40
Did Not Answer	11	16	0
Total Responses	110	90	100

Source: Programed data sheets obtained from the three teachers

TABLE II

PROGRAMED TEST DATA OBTAINED
FROM THREE HEAD START CLASSES IN THE
BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT
DURING AUGUST, 1966
(Second Test)

	Teacher A	Teacher B	Teacher C
Number Right	77	44	81
Number Wrong	42	31	19
Did not Answer	1	5	0
TOTAL Responses	120	80	100

Source: Programed data sheets obtained from the three teachers

A shows 77 correct and 42 incorrect and only one question unanswered. The students under teacher B responded with 44 correct; 31 incorrect, and 5 unanswered questions. Students under teacher C answered 81 correctly, 19 incorrectly and none that were unanswered.

C. Table III, page 6

The third test reveals that group A answered 65 correctly, 35 incorrectly, and none who failed to answer. Group B indicates 44 correct, 31 incorrect and 5 who did not answer. The group under teacher C continued to improve with 86 correct, 14 incorrect, and no questions unanswered.

D. Table IV, page 7

A summary of the three groups for each test is as follows: the first test revealed 148 correct, 125 incorrect, and 27 who did not respond; the second test shows decided growth in correct responses with 202 correct, a decrease in incorrect with 92, and only six questions unanswered. The third test was affected by absentees, however, the ratio shows growth with 195 correct, 80 incorrect and only 5 unanswered.

E. Table V, page 8

The data presented in the remaining tables reflect adequately the difference encountered with the sample test. Group A has 44.5 per cent incorrect, group B 43.3 per cent and group C 60 per cent correct. Group A has the largest per cent incorrect with 45.5, group C 40 per cent and group B 38.9 per cent incorrect. It should be noted that group B had the largest per cent with no responses (17.8 per cent).

F. See Table VI, page 9

In Table VI group A shows 64.2 correct responses. This same group showed only 44.5 per cent on the first test and prior to having the correct responses taught by the teacher. Group B shows 55 per cent correct and group C 81 per cent. Group C had only 19 per cent incorrect compared to 35 per cent and 38.8 per cent for groups A and B. Group B still shows the highest number who did not answer with 6.2 per cent.

G. See Table VII, page 10

The B group shows exactly the same percentages for the third test and for the second, however, gains are shown for groups A and C on a diminishing basis.

H. See Table VIII, page 11

A compilation of responses indicate a wide difference from first test to second test with smaller gains from second test to third test. A sequence was established showing 49.3 per cent, 67.3 per cent, and 69.6 per cent correct responses. Conversely the number wrong shows 41.7 per cent, 30.7 per cent, and 28.6 per cent from the first test through the third. The number of questions unanswered show a decline from 9.0 per cent, 2.0 per cent, to 1.8 per cent on the third test.

TABLE III

PROGRAMED TEST DATA OBTAINED
FROM THREE HEAD START CLASSES IN THE
BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT
DURING AUGUST, 1966
(Third Test)

	Teacher A	Teacher B	Teacher C
Number Right	65	44	86
Number Wrong	35	31	14
Did Not Answer	0	5	0
TOTAL Responses	100	80	100

Source: Programed data sheets obtained from the three teachers.

TABLE IV

SUMMARY OF ALL TEST DATA
COMBINING ALL THREE HEAD START CLASSES
IN THE BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT
AUGUST, 1966

	First Test	Second Test	Third Test
Number Right	148	202	195
Number Wrong	125	92	80
Did not Answer	27	6	5
Total	300	300	280

NOTE: Numbers change because of absentees

Source: Compilation of Tables I, II, and III

B. Percentage of response in each category

TABLE V

PERCENTAGE OF CORRECT, INCORRECT, AND NO RESPONSE ANSWERS OF THREE HEAD START CLASSES IN THE BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT AUGUST, 1966 (First Test)

	Teacher A	Teacher B	Teacher C
Number Right	44.5	43.3	60.0
Number Wrong	45.5	38.9	40.0
Did Not Answer	10.0	17.8	0
Total Responses	100.0	100.0	100.0

Source: Calculations by author

TABLE VI

PERCENTAGE OF CORRECT, INCORRECT, AND NO RESPONSE ANSWERS OF THREE HEAD START CLASSES IN THE BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT
August, 1966
(Second Test)

	Teacher A	Teacher B	Teacher C
Number Right	64.2	55.0	81.0
Number Wrong	35.0	38.8	19.0
Did Not Answer	.8	6.2	0
Total Responses	100.0	100.0	100.0

Source: Calculations by author

TABLE VII

PERCENTAGE OF CORRECT, INCORRECT, AND
NO RESPONSE ANSWERS OF THREE HEAD START CLASSES
IN THE BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT
August, 1966
(Third Test)

	Teacher A	Teacher B	Teacher C
Number Right	65.0	55.0	86.0
Number Wrong	35.0	38.8	14.0
Did Not Answer	0	6.2	0
Total Responses	100.0	100.0	100.0

Source: Calculations by author

C. Summary by percentage

TABLE VIII

SUMMARY OF TEST RESULTS SHOWN
BY PER CENT OF RESPONSES
BY THREE CLASSES OF STUDENTS
ENROLLED IN PROJECT HEAD START
BILOXI MUNICIPAL SEPARATE SCHOOL DISTRICT
AUGUST, 1966

	First Test Per Cent	Second Test Per Cent	Third Test Per Cent
Number Right	49.3	67.3	69.6
Number Wrong	41.7	30.7	28.6
Did Not Answer	9.0	2.0	1.8
TOTAL	100.0	100.0	100.0

TABLE IX

SUMMARY OF DIFFERENCES OF RESPONSES IN PER CENT
FORM OF THREE HEAD START
CLASSES IN THE BILOXI MUNICIPAL
SEPARATE SCHOOL DISTRICT
AUGUST, 1966

	First Test	Change From First Test to Second Test	Change from First Test to Third Test
Number Right	49.3	18.0	20.3
Number Wrong	41.7	-11.0	-13.1
Did Not Answer	9.0	- 7.0	- 7.2

Source: Compilation by author from Table VIII

V. Summary and Conclusion

This study even though limited in scope provides adequate proof as to the amenability of pre-school children to be tested by programed material.

A. The children tested, in the opinion of Head Start officials, were the lowest in ability and achievement; however, the second time tested indicated clearly that children of all ages and abilities are able to learn to use programed data.

B. The utilization of cartoon characters provided an easy identification for all children tested.

C. The teach and reteach method clearly indicates that students may learn even over a short period of time. Table VIII indicates that there are diminishing returns after the first session. The number of correct responses revealed 49.3 per cent prior to instruction and 67.3 per cent after being taught on one occasion. After the second test an increase of only 2.3 per cent gain was made indicating that diminishing returns would be received following the first session.

D. The questions asked concerning morality provided rather startling responses. An overwhelming number of children said that they would keep money found on the playground even if they knew the person who lost it. Most children said that they preferred to watch television on Sunday instead of going to church. They also indicated doubts about obeying parents.

It is obvious that pre-school children from poverty homes need to learn proper mores of the community. This can be done, to some degree, by programed materials.

APPENDIX A

Material suggested by Gloria and Mike Massey

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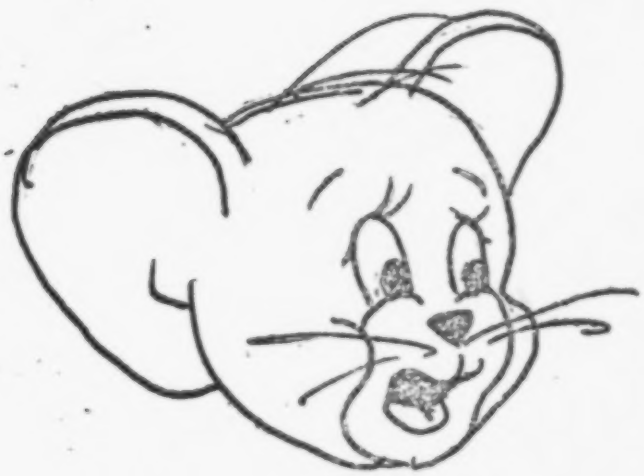

APPENDIX B

TO: All Head Start Teachers Participating in Programed Instruction

FROM: Bill Lee, Assistant Superintendent

SUBJECT: Pilot Project

DATE: August 10, 1966

I have asked that you participate in a pilot project to determine if pre-school children can benefit by programed instruction. I am giving you a printed page(s), the script, that will be on tape. There may be a few variations depending on the ad libs.

The correct answer at this point is not important. The way the children follow the instructions is important.

You will notice on the script that it calls for the tape recorder to stop at certain points. At this time, you will make sure that all of the children understand.

At the end of the session, I would like for you to use the questions and answers as a teaching situation to determine if reinforcement by teachers makes a difference.

You will listen to the tape in private following along with your instructions in order that you can be familiar with the material as the children progress.

Do not under any circumstances assist the children in finding the correct answer. You may assist him in placing his finger in the proper circle. At the end of the tape please indicate the number of students who get the questions right, the number of students who answered incorrectly, and the number who did not answer at all.

Mr. Ray, Mr. Bullock or I will visit the following morning to personally interview each student.

Thank you for your attention to this matter.

Good morning Head Starters, my name is Dr. Bill Lee and I am the Assistant Superintendent of the Biloxi schools. The Superintendent, who is our boss, is Mr. R. D. Brown. Mr. Brown and I have heard a great deal about Head Start but we haven't been able to visit very much. I am visiting you today with the use of a tape recorder; it's something like a T. V. with the picture out. How many of you like Head Start? Raise your hand. Fine! Now how many of you are anxious to start the first grade? Raise your hand. My! That's nice.

Your teachers have been telling me that you have been working hard, so this morning I would like to play a little game. Would you like to play? Good! You must pay close attention in order that you understand what you are to do. (Instructions to teacher) Your teacher has given you a crayon and a sheet of paper. Please do not turn the paper over until I tell you to do so.

All right, turn your papers over. Please do not mark anything until I say "mark." Look over on the side with the circles. Put your finger on the batman with a circle drawn around it. I am going to ask you a question and give you two answers. I want you to select the correct answer. I will say the question two times and the answers two times. I will then ask you to mark the correct ones. S T O P

Let's take the first question--A sample already marked in order that you may understand. Put your finger, the one you do not write with, on the batman in the circle. Keep your finger there while I ask the question. Is everybody ready--fine--here we go. Who is Superintendent of the Biloxi Public Schools? Who is Superintendent of the Biloxi Public Schools? Look at the Big Batman and the little Batman on the page, now here is your answer. If Mr. R. D. Brown is Superintendent mark the Big Batman. If Mr. J. B. Broome is Superintendent, mark the Little Batman. REPEAT! Now mark your paper in the same place as is marked on the page. Make the line heavy. Just look at your paper--not other people. STOP

Is everybody ready for number two? Answer loud enough for me to hear--Fine!

Find Robin with a circle around him and put your finger there. Everybody set? The Question. What if a little boy found a quarter on the playground? What if a little boy found a quarter on the playground? (Answer: He should buy ice cream for himself and his friends? He should give the quarter to his teacher in case someone has lost it?) REPEAT. If he keeps the quarter, mark the Big Robin. If he gives it to the teacher mark the Small Robin. STOP

Move your finger down to Superman and listen carefully. The United States plans to send some men to the moon in 1970. What is the capsule the astronauts have ridden in on the space trips while getting ready to go to the moon?

Answer: The Gemini Space Capsule--The Gemini Space Capsule
Answer: The Apollo Space Capsule--The Apollo Space Capsule

If your answer is Gemini, mark the Big Superman. If your answer is Apollo, mark the Little Superman. STOP

Everybody set? Fine! Move your finger down to Lois Lane. The question--Who is now President of the United States? REPEAT. The answer--Paul B.

Johnson--Paul B. Johnson or Lyndon B. Johnson--Lyndon B. Johnson. If your answer is Paul B. Johnson, mark the Big Lois Lane. If your answer is Lyndon B. Johnson, mark the Little Lois Lane.

Everybody ready? Put your finger on the Tom in the circle. The question--Which of these can you eat? Which of these can you eat? The answers are: Shrimp--or--marbles. REPEAT. If your answer is shrimp, place a mark on Big Tom. If your answer is marbles, place a mark on Little Tom. STOP

Everybody ready? Put your finger on the Jerry with the circle around it. Now the question. What should little children do on a Sunday? REPEAT. The answers are: Stay home and watch T. V. or go to church. If your answer is watching T. V., place a mark on Big Jerry. If your answer is "go to church" place a mark on Little Jerry.

Everybody ready? Put your finger on the underdog with the circle around it. The question is: When should little children obey their Mother and Daddy? REPEAT. The answers: All the time or when I want to. If your answer is all the time, place a mark on Big Underdog. If your answer is "when I want to" place a mark on Little Underdog. STOP

Everybody ready? Put your finger on the "Yogi Bear" with the circle around it. The question is: "How often should children wash their faces and hands? REPEAT. The answers are: Every day, and especially every morning or about two or three times per week. If your answer is "every day" place a mark on Little Yogi Bear. If your answer is two or three times per week, place a mark on Big Yogi Bear.

Everybody ready? Answer Up! Put your finger on the Hercules that has the circle around it. The question is: How important is it to tell the truth? REPEAT. The answers are: I should always tell the truth or most of the time. If your answer is "always" place a mark on Big Hercules. If your answer is "most of the time" place a mark on Little Hercules. STOP

Everybody ready? Put your finger on the Sinbad with a circle around it. The question: How do you like other boys and girls? REPEAT. The answers are: I don't care or I like them. If your answer is "I like them" place a mark on Little Sinbad. If your answer is "I don't care" place a mark on Big Sinbad.

My! I have really had a good time playing this game today. Your teacher will talk to you about the answers. Now, I want you to do something for tomorrow. This must be a secret between just you and me. Some of you already know but don't tell anyone but me, Mr. Ray or Mr. Bullock. You may ask your teacher when you are alone or you may ask your mother or daddy, aunt, grandmother or whomever lives at your home. The question is "Who is Mr. Danny Guice and what does he do?" Remember now--do not tell anyone except your teacher, to me, Mr. Ray or Mr. Bullock. Goodbye now--I will see you early tomorrow morning.